WE CLAIM:

13. A catalytic composition for deodorizing or oxidizing purposes, the composition comprising a coating of a coating material on a support, prepared by a process comprising the steps of:

(i) applying to the support a coating material comprising:

(1) a polycondensate of:

(A) at least one silane of the formula R_a-Si-$X_{(4-a)}$ where each R, which may be the same or different, is a non-hydrolyzable group; each X, which may be the same or different, is a hydroxy group or a non-hydrolyzable group; and a is an integer of 0 to 3 and is greater than 0 for at least 50 mol% of the silanes; or an oligomer derived therefrom, and

(B) optionally, one or more compounds of glass-forming elements; and

(2) particles of at least one transition metal oxide, the weight ratio of the particles of the at least one transition metal oxide to the polycondensate being between 1:10 and 10:1; and

(ii) thermally treating the applied coating material to form the coating.

14. The catalytic composition of Claim 13 where a is greater than 0 for between 50 mol% and 95 mol% of the silanes.

15. The catalytic composition of Claim 13 where the transition metal oxide is selected from the group consisting of the oxides of La, Ce, Ti, Zr, V, Cr, Mo, W, Mn, Fe, Co, Ni, Cu, Ag, Zn, and mixtures thereof.

16. The catalytic composition of Claim 13 where the particles of at least one transition metal oxide have a diameter between 10 nm and 20 µm.

17. The catalytic composition of Claim 13 where the coating has a thickness between 0.01 µm and 500 µm.

18. The catalytic composition of Claim 13 where the support is composed of metal, metal oxide, glass, glass ceramic, ceramic, or porous material.

19. The catalytic composition of Claim 13 where the thermal treatment of step (ii) occurs at between 200 °C and 700 °C.

20. The catalytic composition of Claim 13 where the coating material also comprises inorganic particles.

21. The catalytic composition of Claim 13 where the coating is porous.

22. A process for preparing a catalytic composition for deodorizing or oxidizing purposes, the composition comprising a coating of a coating material on a support, the process comprising the steps of:

(i) applying to the support a coating material comprising:

(1) a polycondensate of:

(A) at least one silane of the formula R_a-Si-$X_{(4-a)}$ where each R, which may be the same or different, is a non-hydrolyzable group; each X, which may be the same or different, is a hydroxy group or a non-hydrolyzable group; and a is an integer of 0 to 3 and is greater than 0 for at least 50 mol% of the silanes; or an oligomer derived therefrom, and

(B) optionally, one or more compounds of glass-forming elements; and

(2) particles of at least one transition metal oxide, the weight ratio of the particles of the at least one transition metal oxide to the polycondensate being between 1:10 and 10:1; and

(ii) thermally treating the applied coating material to form the coating.

23. The process of Claim 22 where the step of thermally treating the applied coating material occurs without drying or after drying of the applied coating material.

24. A method of deodorizing odor-containing air, comprising passing the odor-containing air over a catalytic composition of Claim 13.

25. The method of Claim 24 where the catalytic composition is maintained at a temperature between 150 °C and 500 °C.

26. A method of oxidizing carbon or organic components present on the surface of the composition of Claim 13, comprising heating the composition to a temperature between 150 °C and 500 °C.

REMARKS

The Amendment

Entry of this amendment is respectfully requested. No new matter is added by the amendment, because the new claims find support in the application as filed. In particular, the new claims remove multiple dependent claims and rewrite the claims in more standard US form.